10/517 309

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     (FILE 'HOME' ENTERED AT 12:02:41 ON 15 NOV 2007)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 12:03:10 ON 15 NOV 2007
L1         42227 S PLASTID? OR INTRAPLASTID?
L2             0 S "WKIQKGMIRPF"
L3          2980 S (CHIMER? OR FUS?) AND L1
L4           384 S INNER (W)MEMBRANE(3W)ENVELOPE?
L5            19 S L3 AND L4
L6             6 DUP REM L5 (13 DUPLICATES REMOVED)
                 E MIRAS S/AU
L7            17 S E4
                 E SALVI D/AU
L8            26 S E8
                 E ROLLAND N/AU
L9            87 S E9
                 E JOYARD J/AU
L10          224 S E5
L11          555 S E3-E5
                 E FERRO M/AU
L12          560 S E3
                 E GARIN J/AU
L13          659 S E3
                 E GRUNWALD D/AU
L14          257 S E3
L15         1973 S L7 OR L8 OR L10 OR L11 OR L12 OR L13 OR L14
L16           33 S L4 AND L15
L17            7 DUP REM L16 (26 DUPLICATES REMOVED)

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NEWS	3	JUL 02	SCISEARCH enhanced with complete author names
NEWS	4	JUL 02	CHEMCATS accession numbers revised
NEWS	5	JUL 02	CA/CAplus enhanced with utility model patents from China
NEWS	6	JUL 16	CAplus enhanced with French and German abstracts
NEWS	7	JUL 18	CA/CAplus patent coverage enhanced
NEWS	8	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS	9	JUL 30	USGENE now available on STN
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NEWS	11	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	12	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS	13	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS	14	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	15	AUG 27	USPATOLD now available on STN
NEWS	16	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	17	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	18	SEP 13	FORIS renamed to SOFIS
NEWS	19	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	20	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS	21	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS	22	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	23	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	24	OCT 19	BEILSTEIN updated with new compounds
NEWS	25	NOV 15	Derwent Indian patent publication number format enhanced

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=> s plastid? or intraplastid?
L1       42227 PLASTID? OR INTRAPLASTID?

=> s "WKIQKGMIRPF"
L2           0 "WKIQKGMIRPF"

=> s (chimer? or fus?) and l1
L3        2980 (CHIMER? OR FUS?) AND L1

=> s inner (w)membrane(3W)envelope?
L4         384 INNER (W) MEMBRANE(3W) ENVELOPE?

=> s l3 and l4
L5          19 L3 AND L4

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6            6 DUP REM L5 (13 DUPLICATES REMOVED)

=> d 1-6 ibib ab

L6   ANSWER 1 OF 6     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   2002726614     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 12368288
TITLE:              Non-canonical transit peptide for import into the
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chloroplast.
AUTHOR: Miras Stephane; Salvi Daniel; Ferro Myriam; Grunwald Didier; Garin Jerome; Joyard Jacques; Rolland Norbert
CORPORATE SOURCE: Laboratoire de Physiologie Cellulaire Vegetale, UMR-5019 CNRS/CEA/Universite Joseph Fourier, Grenoble, France.
SOURCE: The Journal of biological chemistry, (2002 Dec 6) Vol. 277, No. 49, pp. 47770-8. Electronic Publication: 2002-10-03.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200302
ENTRY DATE: Entered STN: 20 Dec 2002
Last Updated on STN: 5 Feb 2003
Entered Medline: 4 Feb 2003

AB The large majority of plastid proteins are nuclear-encoded and, thus, must be imported within these organelles. Unlike most of the outer envelope proteins, targeting of proteins to all other plastid compartments (inner envelope membrane, stroma, and thylakoid) is strictly dependent on the presence of a cleavable transit sequence in the precursor N-terminal region. In this paper, we describe the identification of a new envelope protein component (ceQORH) and demonstrate that its subcellular localization is limited to the inner membrane of the chloroplast envelope. Immunopurification, microsequencing of the natural envelope protein and cloning of the corresponding full-length cDNA demonstrated that this protein is not processed in the N-terminal region during its targeting to the inner envelope membrane. Transient expression experiments in plant cells were performed with truncated forms of the ceQORH protein fused to the green fluorescent protein. These experiments suggest that neither the N-terminal nor the C-terminal are essential for chloroplastic localization of the ceQORH protein. These observations are discussed in the frame of the endosymbiotic theory of chloroplast evolution and suggest that a domain of the ceQORH bacterial ancestor may have evolved so as to exclude the general requirement of an N-terminal plastid transit sequence.

L6 ANSWER 2 OF 6 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001513861 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11553816
TITLE: Two types of MGDG synthase genes, found widely in both 16:3 and 18:3 plants, differentially mediate galactolipid syntheses in photosynthetic and nonphotosynthetic tissues in Arabidopsis thaliana.
AUTHOR: Awai K; Marechal E; Block M A; Brun D; Masuda T; Shimada H; Takamiya K; Ohta H; Joyard J
CORPORATE SOURCE: Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama, Kanagawa 226-8501, Japan.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (2001 Sep 11) Vol. 98, No. 19, pp. 10960-5.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB047475; GENBANK-AB047476; GENBANK-AC007187; GENBANK-AJ000331; GENBANK-AL031004
ENTRY MONTH: 200111
ENTRY DATE: Entered STN: 20 Sep 2001
Last Updated on STN: 5 Nov 2001

Entered Medline: 1 Nov 2001

AB In Arabidopsis, monogalactosyldiacylglycerol (MGDG) is synthesized by a multigenic family of MGDG synthases consisting of two types of enzymes differing in their N-terminal portion: type A (atMGD1) and type B (atMGD2 and atMGD3). The present paper compares type B isoforms with the enzymes of type A that are known to sit in the inner membrane of plastid envelope. The occurrence of types A and B in 16:3 and 18:3 plants shows that both types are not specialized isoforms for the prokaryotic and eukaryotic glycerolipid biosynthetic pathways. Type A atMGD1 gene is abundantly expressed in green tissues and along plant development and encodes the most active enzyme. Its mature polypeptide is immunodetected in the envelope of chloroplasts from Arabidopsis leaves after cleavage of its transit peptide. atMGD1 is therefore likely devoted to the massive production of MGDG required to expand the inner envelope membrane and build up the thylakoids network. Transient expression of green fluorescent protein fusions in Arabidopsis leaves and in vitro import experiments show that type B precursors are targeted to plastids, owing to a different mechanism. Noncanonical addressing peptides, whose processing could not be assessed, are involved in the targeting of type B precursors, possibly to the outer envelope membrane where they might contribute to membrane expansion. Expression of type B enzymes was higher in nongreen tissues, i.e., in inflorescence (atMGD2) and roots (atMGD3), where they conceivably influence the eukaryotic structure prominence in MGDG. In addition, their expression of type B enzymes is enhanced under phosphate deprivation.

L6 ANSWER 3 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
DUPLICATE 3

ACCESSION NUMBER: 1995:351866 BIOSIS
DOCUMENT NUMBER: PREV199598366166
TITLE: Ultrastructural differentiation of the ovarian transmitting tissue in Lilium regale.
AUTHOR(S): Singh, Sangeeta [Reprint author]; Walles, Bjorn
CORPORATE SOURCE: Dep. Botany, Stockholm Univ., S-106 91 Stockholm, Sweden
SOURCE: Annals of Botany (London), (1995) Vol. 75, No. 5, pp. 455-462.
CODEN: ANBOA4. ISSN: 0305-7364.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Aug 1995
Last Updated on STN: 10 Aug 1995

AB The cells of the ovarian transmitting tissue of Lilium regale are papilla shaped and form an epithelium on the placenta. Their ultrastructural organization and differentiation from 1 d before to 7 d after anthesis is presented. These placenta cells are typical transfer cells with a prominent secretion zone similar to that known from stylar canal cells. After anthesis the secretion zone continues to grow by addition of vesicles from the numerous dictyosomes. Maximum depth of this zone is reached by day 4 after anthesis. The outer surface of the cell wall is distinctly rugged on cell maturation and the outermost layer is corroded. The ER system undergoes transition from a smooth to a granular condition. Before anthesis there is a central vacuole which at anthesis is reduced to a system of small vacuoles. These are supplemented by autophagic vacuoles formed from the ER. Such vacuoles are found near the secretion zone and may also fuse with the plasmalemma. The cuticle is sloughed and secretion commences before anthesis. Accumulations of vesicles found in the nucleus and occasional connections between such vesicles and the inner membrane of the nuclear envelope indicate the presence of a nuclear network. Protein crystals are present in the cytoplasm and the nucleus. The starch grains in the plastids are digested after anthesis, but new ones are formed by days 6 and 7.

L6 ANSWER 4 OF 6 MEDLINE on STN DUPLICATE 4

ACCESSION NUMBER: 79130618 MEDLINE
DOCUMENT NUMBER: PubMed ID: 422674
TITLE: The route of entry of cytoplasmically synthesized proteins into chloroplasts of algae possessing chloroplast ER.
AUTHOR: Gibbs S P
SOURCE: Journal of cell science, (1979 Feb) Vol. 35, pp. 253-66.
Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197905
ENTRY DATE: Entered STN: 15 Mar 1990
Last Updated on STN: 15 Mar 1990
Entered Medline: 26 May 1979

AB In 8 classes of algae, namely the Cryptophyceae, Raphidophyceae, Haptophyceae, Chrysophyceae, Bacillariophyceae, Xanthophyceae, Eustigmatophyceae and Phaeophyceae, the chloroplasts, in addition to being surrounded by a double-membraned chloroplast envelope, are also enclosed by a cisterna of endoplasmic reticulum called the chloroplast ER. Often this ER cisterna is continuous with the outher membrane of the nuclear envelope in such a manner that the nuclear envelope forms a part of the ER sac enclosing the chloroplast. In all these classes of algae except the Cryptophyceae, a regular network of tubules and vesicles, named the periplastidal reticulum, is present at a specific location between the chloroplast envelope and the chloroplast ER. In the Cryptophyceae, scattered vesicles are found between the chloroplast envelope and the chloroplast ER. Ribosomes which have been shown to be arranged to polysomes are found on the outer membrane of the chloroplast ER. It is proposed that nuclear-coded proteins which are destined for the chloroplast are synthesized on these polysomes, passing during synthesis into the lumen of the ER cisterna. Vesicles containing these proteins then pinch off the chloroplast ER and form the periplastidal reticulum. Vesicles containing these proteins then pinch off the chloroplast ER and form the periplastidal reticulum. Vesicles then fuse with the outer membrane of the chloroplast envelope thereby delivering their contents to the lumen of the chloroplast envelope. Proteins then cross the inner membrane of the chloroplast envelope in an as yet unknown manner. Experimental evidence for this hypothesis comes from studies on Ochromonas danica using chloramphenicol and spectinomycin, which inhibit protein synthesis on plastid ribosomes, and cycloheximide, which inhibits protein synthesis on cytoplasmic ribosomes. In cells of Ochromonas exposed to chloramphenicol or spectinomycin, the periplastidal reticulum proliferates markedly becoming several layers thick. Presumably this build up of periplastidal reticulum occurs because the transport of cytoplasmically synthesized plastid proteins is slowed down when protein synthesis in the chloroplast is inhibited. Conversely, when cells of Ochromonas are treated with cycloheximide, there is a reduction in the amount of periplastidal reticulum presumably because there are no cytoplasmically synthesized proteins to be transported into the chloroplast.

L6 ANSWER 5 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1978:126600 BIOSIS
DOCUMENT NUMBER: PREV197865013600; BA65:13600
TITLE: INTIMATE ASSOCIATION BETWEEN ENDOPLASMIC RETICULUM AND PLASTIDS DURING MICRO SPOROGENESIS IN LYCOPERSICUM-ESCULENTUM AND SOLANUM-TUBEROSUM.
AUTHOR(S): ABREU I [Reprint author]; SANTOS A
CORPORATE SOURCE: EXP CYTOL CENT, INST BOT, UNIV PORTO, PORTO, PORT
SOURCE: Journal of Submicroscopic Cytology, (1977) Vol. 9, No. 2-3, pp. 239-246.
CODEN: JSMCBM. ISSN: 0022-4782.
DOCUMENT TYPE: Article

FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB An association of endoplasmic reticulum and plastids is described, with emphasis on the fusion observed between membranes of both organelles. The area of endoplasmic reticulum membrane which becomes associated looses ribosomes and fuses with the outer membrane of the plastid envelope, in which case the space between the 2 membranes of the plastid envelope persists. In other cases, the inner membrane of the plastid envelope is also seen adpressed against the others, in which case 3 membranes appear fused in the region of association. The association does not exist in the pollen mother cell stage. Immediately after meiosis some plastids already show associated endoplasmic reticulum. The frequency of association increases in the following stages, reaching a maximum just prior the mitotic division of the microspores. After mitotic division the association progressively lessens, till it no longer is visible when the large vacuoles have diappeared. This intimate association of endoplasmic reticulum-plastids was searched in 21 spp. of Solanaceae and was only found in L. esculentum Mill. and S. tuberosum L. [The other species studied include: S. cervantesii, S. ottonis, S. capsicastrum, S. pseudocapsicum, S. marginatum, S. luteum ssp. luteum, S. nigrum, S. mauritianum, Nicotiana alata, N. sylvestris, N. glauca, N. rustica, Datura knightii, Cyphomandra abutyloides, Withania somnifera, Physalis pubescens, Saracha jaltomata, Salpichroa origanifolia and Capsicum annuum.] Some possible functions of the association are discussed.

L6 ANSWER 6 OF 6 EMBASE DUPLICATE 5

ACCESSION NUMBER: 1974128917 EMBASE
TITLE: Effects of nalidixic acid, chloramphenicol, cycloheximide, and anisomycin on structure and development of plastids and mitochondria in greening Euglena gracilis.
AUTHOR: Neumann D.; Parthier B.
CORPORATE SOURCE: Inst. Plant Biochem., Res. Cent. Molec. Biol. Med., Acad. Sci., Halle, German Democratic Republic
SOURCE: Experimental Cell Research, (1973) Vol. 81, No. 2, pp. 255-268.
ISSN: 0014-4827 CODEN: ECREAL
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
029 Clinical and Experimental Biochemistry
LANGUAGE: English

AB The substructure of plastids and mitochondria and the alterations caused by the addition of antibiotics were investigated during light induced proplastid to chloroplast transformation in Euglena gracilis. The organisms were grown in presence of the inhibitors up to 3 days (5 generations). Both 40 μg/ml nalidixic acid and 1-1.5 mg/ml chloramphenicol prevent the formation of chloroplasts of normal size and structure by blocking development during early stages. 2 to 5 straight thylakoids are formed beside 1 to 2 girdle like thylakoids. The former rarely fuse into bands. Non crystalline prolamellar bodies of considerable size are formed at the distended ends of the plastids in the presence of both drugs. Chloramphenicol also influences mitochondrial size, shape and internal structure. Giant mitochondria can be observed. Nalidixic acid does not change the size and shape of mitochondria, but the matrix frequently appears highly osmiophilic. Cycloheximide in sublethal doses (2-5 μg/ml) or 50 μg/ml anisomycin inhibits plastid development only in the early period after addition. In later culture periods chloroplasts are found enlarged in size with an increased number of thylakoids and bands per organelle.

Insertions of new bands are noted at the inner membrane of the chloroplast envelope. The electronmicroscopic observations agree with the results of chloroplast specific biochemical activities such as light induced increase in chlorophyll synthesis and of two chloroplast bound enzyme activities. The results are discussed with respect to metabolic and biogenetic correlations between the two types of organelles in E. gracilis cells.

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L3          2980 S (CHIMER? OR FUS?) AND L1
L4           384 S INNER (W)MEMBRANE(3W)ENVELOPE?
L5            19 S L3 AND L4
L6             6 DUP REM L5 (13 DUPLICATES REMOVED)

=> e miras s/au
E1           11      MIRAS ROGER/AU
E2            1      MIRAS RUIZ A/AU
E3            8  --> MIRAS S/AU
E4           17      MIRAS STEPHANE/AU
E5            5      MIRAS T/AU
E6            1      MIRAS TERESA M/AU
E7            1      MIRAS TH/AU
E8            4      MIRAS Y/AU
E9            2      MIRAS YANNICK/AU
E10           2      MIRASADEGHI S/AU
E11           1      MIRASANCHEZ E/AU
E12           1      MIRASANO ANATOLE/AU

=> s e4
L7           17 "MIRAS STEPHANE"/AU

=> e salvi d/au
E1            7      SALVI COLOMBO/AU
E2            1      SALVI CRISTINAMARIA/AU
E3           62  --> SALVI D/AU
E4            9      SALVI D A/AU
E5            1      SALVI D M/AU
E6            4      SALVI D P/AU
E7            1      SALVI D R/AU
E8           26      SALVI DANIEL/AU
E9            1      SALVI DARIO/AU
E10          15      SALVI DEBRA/AU
E11           2      SALVI DEBRA A/AU
E12           3      SALVI DEL PERO C/AU

=> s e8
L8           26 "SALVI DANIEL"/AU

=> e rolland n/au
E1            1      ROLLAND MRS/AU
E2            1      ROLLAND MRS M/AU
E3          123  --> ROLLAND N/AU
E4            3      ROLLAND NATHALIE/AU
E5            6      ROLLAND NICOLAS/AU
E6            2      ROLLAND NICOLE/AU
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E7            1      ROLLAND NILS L/AU
E8            2      ROLLAND NILS LENNART/AU
E9           87      ROLLAND NORBERT/AU
E10          27      ROLLAND O/AU
E11          14      ROLLAND OLIVIER/AU
E12           1      ROLLAND OVILA/AU

=> s e9
L9           87 "ROLLAND NORBERT"/AU

=> e joyard j/au
E1            1      JOYAPA B S/AU
E2            1      JOYARD BERNARD/AU
E3          330 --> JOYARD J/AU
E4            1      JOYARD JACQEUS/AU
E5          224      JOYARD JACQUES/AU
E6            1      JOYARD JAQUES/AU
E7           15      JOYAS A/AU
E8            4      JOYAS ALEJANDRO/AU
E9            1      JOYAS M ALEJANDRO/AU
E10           2      JOYAS MARTINEZ T M/AU
E11           1      JOYAS T M/AU
E12           8      JOYASAWAL S/AU

=> s e5
L10         224 "JOYARD JACQUES"/AU

=> s e3-e5
L11         555 ("JOYARD J"/AU OR "JOYARD JACQEUS"/AU OR "JOYARD JACQUES"/AU)

=> e ferro m/au
E1            1      FERRO LUZZL MANFREDI/AU
E2            3      FERRO LYNN/AU
E3          560 --> FERRO M/AU
E4           96      FERRO M A/AU
E5            1      FERRO M A C/AU
E6           37      FERRO M C/AU
E7          105      FERRO M E/AU
E8            2      FERRO M F/AU
E9            3      FERRO M G/AU
E10           1      FERRO M H M/AU
E11           6      FERRO M I/AU
E12           1      FERRO M I A/AU

=> s e3
L12         560 "FERRO M"/AU

=> e garin j/au
E1            5      GARIN I N/AU
E2           10      GARIN INAZIO/AU
E3          659 --> GARIN J/AU
E4            1      GARIN J A L/AU
E5            4      GARIN J C/AU
E6            3      GARIN J D/AU
E7           29      GARIN J F/AU
E8           33      GARIN J L/AU
E9           17      GARIN J M/AU
E10         327      GARIN J P/AU
E11           1      GARIN JACQUES/AU
E12         120      GARIN JAVIER/AU

=> s e3
L13         659 "GARIN J"/AU
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=> e grunwald d/au
E1            3      GRUNWALD CLAUDIA/AU
E2           35      GRUNWALD CLAUS/AU
E3          257 --> GRUNWALD D/AU
E4            4      GRUNWALD D C/AU
E5            1      GRUNWALD D H/AU
E6          112      GRUNWALD D J/AU
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E9            8      GRUNWALD DAVID/AU
E10          25      GRUNWALD DAVID J/AU
E11          21      GRUNWALD DAVID JONAH/AU
E12           2      GRUNWALD DAVOR/AU

=> s e3
L14         257 "GRUNWALD D"/AU

=> d his

     (FILE 'HOME' ENTERED AT 12:02:41 ON 15 NOV 2007)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
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L5            19 S L3 AND L4
L6             6 DUP REM L5 (13 DUPLICATES REMOVED)
                 E MIRAS S/AU
L7            17 S E4
                 E SALVI D/AU
L8            26 S E8
                 E ROLLAND N/AU
L9            87 S E9
                 E JOYARD J/AU
L10          224 S E5
L11          555 S E3-E5
                 E FERRO M/AU
L12          560 S E3
                 E GARIN J/AU
L13          659 S E3
                 E GRUNWALD D/AU
L14          257 S E3

=> s l7 or l8 or l10 or l11 or l12 or l13 or l14
L15         1973 L7 OR L8 OR L10 OR L11 OR L12 OR L13 OR L14

=> s l4 and l15
L16           33 L4 AND L15

=> dup rem l16
PROCESSING COMPLETED FOR L16
L17            7 DUP REM L16 (26 DUPLICATES REMOVED)

=> d 1-7 ibib ab

L17  ANSWER 1 OF 7     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:    2002726614     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 12368288
TITLE:               Non-canonical transit peptide for import into the
                     chloroplast.
AUTHOR:              Miras Stephane; Salvi Daniel; Ferro
                     Myriam; Grunwald Didier; Garin Jerome; Joyard
```

Jacques; Rolland Norbert
CORPORATE SOURCE: Laboratoire de Physiologie Cellulaire Vegetale, UMR-5019 CNRS/CEA/Universite Joseph Fourier, Grenoble, France.
SOURCE: The Journal of biological chemistry, (2002 Dec 6) Vol. 277, No. 49, pp. 47770-8. Electronic Publication: 2002-10-03. Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200302
ENTRY DATE: Entered STN: 20 Dec 2002
Last Updated on STN: 5 Feb 2003
Entered Medline: 4 Feb 2003

AB The large majority of plastid proteins are nuclear-encoded and, thus, must be imported within these organelles. Unlike most of the outer envelope proteins, targeting of proteins to all other plastid compartments (inner envelope membrane, stroma, and thylakoid) is strictly dependent on the presence of a cleavable transit sequence in the precursor N-terminal region. In this paper, we describe the identification of a new envelope protein component (ceQORH) and demonstrate that its subcellular localization is limited to the inner membrane of the chloroplast envelope. Immunopurification, microsequencing of the natural envelope protein and cloning of the corresponding full-length cDNA demonstrated that this protein is not processed in the N-terminal region during its targeting to the inner envelope membrane. Transient expression experiments in plant cells were performed with truncated forms of the ceQORH protein fused to the green fluorescent protein. These experiments suggest that neither the N-terminal nor the C-terminal are essential for chloroplastic localization of the ceQORH protein. These observations are discussed in the frame of the endosymbiotic theory of chloroplast evolution and suggest that a domain of the ceQORH bacterial ancestor may have evolved so as to exclude the general requirement of an N-terminal plastid transit sequence.

L17 ANSWER 2 OF 7 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001513861 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11553816
TITLE: Two types of MGDG synthase genes, found widely in both 16:3 and 18:3 plants, differentially mediate galactolipid syntheses in photosynthetic and nonphotosynthetic tissues in Arabidopsis thaliana.
AUTHOR: Awai K; Marechal E; Block M A; Brun D; Masuda T; Shimada H; Takamiya K; Ohta H; Joyard J
CORPORATE SOURCE: Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama, Kanagawa 226-8501, Japan.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (2001 Sep 11) Vol. 98, No. 19, pp. 10960-5.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB047475; GENBANK-AB047476; GENBANK-AC007187; GENBANK-AJ000331; GENBANK-AL031004
ENTRY MONTH: 200111
ENTRY DATE: Entered STN: 20 Sep 2001
Last Updated on STN: 5 Nov 2001
Entered Medline: 1 Nov 2001

AB In Arabidopsis, monogalactosyldiacylglycerol (MGDG) is synthesized by a

multigenic family of MGDG synthases consisting of two types of enzymes differing in their N-terminal portion: type A (atMGD1) and type B (atMGD2 and atMGD3). The present paper compares type B isoforms with the enzymes of type A that are known to sit in the inner membrane of plastid envelope. The occurrence of types A and B in 16:3 and 18:3 plants shows that both types are not specialized isoforms for the prokaryotic and eukaryotic glycerolipid biosynthetic pathways. Type A atMGD1 gene is abundantly expressed in green tissues and along plant development and encodes the most active enzyme. Its mature polypeptide is immunodetected in the envelope of chloroplasts from Arabidopsis leaves after cleavage of its transit peptide. atMGD1 is therefore likely devoted to the massive production of MGDG required to expand the inner envelope membrane and build up the thylakoids network. Transient expression of green fluorescent protein fusions in Arabidopsis leaves and in vitro import experiments show that type B precursors are targeted to plastids, owing to a different mechanism. Noncanonical addressing peptides, whose processing could not be assessed, are involved in the targeting of type B precursors, possibly to the outer envelope membrane where they might contribute to membrane expansion. Expression of type B enzymes was higher in nongreen tissues, i.e., in inflorescence (atMGD2) and roots (atMGD3), where they conceivably influence the eukaryotic structure prominence in MGDG. In addition, their expression of type B enzymes is enhanced under phosphate deprivation.

L17 ANSWER 3 OF 7 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1999449603 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10518794
TITLE: Biochemical and topological properties of type A MGDG synthase, a spinach chloroplast envelope enzyme catalyzing the synthesis of both prokaryotic and eukaryotic MGDG.
AUTHOR: Miege C; Marechal E; Shimojima M; Awai K; Block M A; Ohta H; Takamiya K; Douce R; Joyard J
CORPORATE SOURCE: Department de Biologie Moleculaire et Structurale, Laboratoire de Physiologie Cellulaire Vegetale, Commissariat a lEnergie Atomique-Grenoble, URA CNRS 576, France.
SOURCE: European journal of biochemistry / FEBS, (1999 Nov) Vol. 265, No. 3, pp. 990-1001.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AJ249607
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 13 Jan 2000
Last Updated on STN: 13 Jan 2000
Entered Medline: 14 Dec 1999

AB MGDG synthase, the enzyme that catalyzes the synthesis of the major chloroplast membrane lipid monogalactosyldiacylglycerol (MGDG), is encoded by a multigenic family. We have analyzed the biochemical properties, subcellular localization and membrane topology of a spinach chloroplast MGDG synthase, a representative member of the type A family from Spinacia oleracea (soMGD A), using a recombinant protein that was functionally overexpressed in Escherichia coli and specific polyclonal antibodies. We demonstrated that soMGD A could catalyze the synthesis of both 'prokaryotic' and 'eukaryotic' MGDG molecular species in vitro, with a selectivity for diacylglycerol similar to that of purified chloroplast envelope MGDG synthase activity. Furthermore, soMGD A was shown to be sensitive to chemical reagents (dithiothreitol, N-ethylmaleimide and o-phenanthroline) known to affect MGDG synthesis by the partially purified enzyme, as well as in isolated chloroplast envelope membranes. In spinach chloroplasts, soMGD A was localized by Western blot analysis in the inner

envelope membrane. Topological studies demonstrated that soMGD A is a monotopic enzyme, embedded within one leaflet of the inner envelope membrane from spinach chloroplasts, a structure which may involve amphipathic alpha helices. We further demonstrated that in vitro, soMGD A precursor is imported and processed to its correct mature form in intact chloroplasts. These results show that soMGD A corresponds to a mature polypeptide of approximately 45 kDa. In addition, inactivation kinetics after gamma-ray irradiation strongly suggest that both native chloroplast envelope MGDG synthase and recombinant soMGD A have a functional molecular mass of 95-100 kDa, indicating that they are probably active as homodimers made of two 45-kDa subunits. This study suggests that, in spite of the growing evidence that MGDG synthesis is catalyzed by a multigenic family of enzymes, in spinach leaves both prokaryotic and eukaryotic MGDG syntheses could be attributable to a unique dimeric enzyme, provided that diacylglycerol is transported from the outer membrane to the inner membrane of the chloroplast envelope.

L17 ANSWER 4 OF 7 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 97111379 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8953251
TITLE: Is E37, a major polypeptide of the inner membrane from plastid envelope, an S-adenosyl methionine-dependent methyltransferase?.
AUTHOR: Teyssier E; Block M A; Douce R; Joyard J
CORPORATE SOURCE: Laboratoire de Physiologie Cellulaire Vegetale (URA CNRS no. 576), DBMS, CEA-Grenoble et Universite, France.
SOURCE: The Plant journal : for cell and molecular biology, (1996 Nov) Vol. 10, No. 5, pp. 903-12.
Journal code: 9207397. ISSN: 0960-7412.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L20427; GENBANK-M98330; GENBANK-X56963; GENBANK-X94968
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 21 Mar 1997
Last Updated on STN: 21 Mar 1997
Entered Medline: 13 Mar 1997

AB Using antibodies raised against E37, one of the major polypeptides of the inner membrane from the chloroplast envelope, it has been demonstrated that a single immunologically related polypeptide was present in total protein extracts from various higher plants (monocots and dicots), in photosynthetic and non-photosynthetic tissues from young spinach plantlets, as well as in the cytoplasmic membrane from the cyanobacteria Synechococcus. This ubiquitous distribution of E37 strongly suggests that this protein plays an envelope-specific function common to all types of plastids. Comparison of tobacco and spinach E37 amino acid sequences deduced from the corresponding cDNA demonstrates that consensus motifs for S-adenosyl methionine-dependent methyltransferases are located in both sequences. This hypothesis was confirmed using a biochemical approach. It was demonstrated that E37, together with two minor spinach chloroplast envelope polypeptides of 32 and 39 kDa, can be specifically photolabeled with [3H]-S-adenosyl methionine upon UV-irradiation. Identification of E37 as a photolabeled polypeptide was established by immunoprecipitation. Furthermore, photolabeling of the three envelope polypeptides was specifically inhibited by very low concentration of S-adenosyl homocysteine, thus providing evidence for the presence within these proteins of S-adenosyl methionine- and S-adenosyl homocysteine-binding sites that were closely associated. Taken as a whole these results strongly suggest that E37 is an ubiquitous plastid envelope protein that probably has an S-adenosyl methionine-dependent methyltransferase activity. The 32 and 39 kDa envelope polypeptides probably have a similar methyltransferase activity.

L17 ANSWER 5 OF 7 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 91348205 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1879527
TITLE: Purification and characterization of E37, a major chloroplast envelope protein.
AUTHOR: Block M A; Joyard J; Douce R
CORPORATE SOURCE: DBMS/PCV, UA no. 576 au CNRS, CENG et UJF 85X, Grenoble, France.
SOURCE: FEBS letters, (1991 Aug 5) Vol. 287, No. 1-2, pp. 167-70.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199109
ENTRY DATE: Entered STN: 20 Oct 1991
Last Updated on STN: 20 Oct 1991
Entered Medline: 27 Sep 1991

AB We have purified to homogeneity E37, the second major polypeptide of the inner membrane of the chloroplast envelope.
The protein was retained on a Mono S column at pH 7, indicating it is a basic protein. After cyanogen cleavage, the protein was partially sequenced at 2 different sites. The sequence is compared with the deduced amino acid sequence of a cDNA coding for a 37 kDa envelope polypeptide recently published by Dreses-Werringloer et al. (Eur. J. Biochem. (1991) 195, 361-368.)

L17 ANSWER 6 OF 7 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 85173336 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3985624
TITLE: Localization and synthesis of prenylquinones in isolated outer and inner envelope membranes from spinach chloroplasts.
AUTHOR: Soll J; Schultz G; Joyard J; Douce R; Block M A
SOURCE: Archives of biochemistry and biophysics, (1985 Apr) Vol. 238, No. 1, pp. 290-9.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198505
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 20 Mar 1990
Entered Medline: 16 May 1985

AB The prenylquinone content and biosynthetic capabilities of membrane fractions enriched in outer and inner envelope membranes from spinach chloroplasts were analyzed. Both envelope membranes contain prenylquinones, and in almost similar amounts (on a protein basis). However, the outer envelope membrane contains more alpha-tocopherol than the inner one although this prenylquinone is the major one in both fractions. On the contrary, plastoquinone-9 is present in higher amounts in the inner envelope membrane than in the outer one. In addition, it has been demonstrated that all the enzymes involved in the last steps of alpha-tocopherol and plastoquinone-9 biosynthesis, i.e., homogentisate decarboxylase polyprenyltransferase, S-adenosyl-methionine:methyl-6-phytylquinol methyltransferase, S-adenosyl-methionine: alpha-tocopherol methyltransferase, homogentisate decarboxylase solanesyltransferase, S-adenosyl-methionine:methyl-6-solanesylquinol methyltransferase, and possibly 2,3-dimethylphytylquinol cyclase, are localized on the inner envelope membrane. These results demonstrate that the inner membrane of the chloroplast envelope plays a key role in

chloroplast biogenesis, and especially for the synthesis of the two major plastid prenylquinones.

L17 ANSWER 7 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
DUPLICATE 7
ACCESSION NUMBER: 1984:19850 BIOSIS
DOCUMENT NUMBER: PREV198426019850; BR26:19850
TITLE: ACYL COENZYME A SYNTHETASE EC-6.2.1.3 AND ACYL COENZYME A THIO ESTERASE EC-2.3.1.9 ARE LOCATED ON THE OUTER AND INNER MEMBRANE OF THE CHLOROPLAST ENVELOPE RESPECTIVELY.
AUTHOR(S): BLOCK M A [Reprint author]; DORNE A-J; JOYARD J; DOUCE R
CORPORATE SOURCE: ESMG, 85X, 38041 GRENOBLE-CEDEX, FR
SOURCE: Febs Letters, (1983) Vol. 153, No. 2, pp. 377-381.
CODEN: FEBLAL. ISSN: 0014-5793.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: ENGLISH

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(FILE 'HOME' ENTERED AT 12:02:41 ON 15 NOV 2007)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 12:03:10 ON 15 NOV 2007

L1	42227	S	PLASTID? OR INTRAPLASTID?
L2	0	S	"WKIQKGMIRPF"
L3	2980	S	(CHIMER? OR FUS?) AND L1
L4	384	S	INNER (W)MEMBRANE(3W)ENVELOPE?
L5	19	S	L3 AND L4
L6	6	DUP REM	L5 (13 DUPLICATES REMOVED)
		E	MIRAS S/AU
L7	17	S	E4
		E	SALVI D/AU
L8	26	S	E8
		E	ROLLAND N/AU
L9	87	S	E9
		E	JOYARD J/AU
L10	224	S	E5
L11	555	S	E3-E5
		E	FERRO M/AU
L12	560	S	E3
		E	GARIN J/AU
L13	659	S	E3
		E	GRUNWALD D/AU
L14	257	S	E3
L15	1973	S	L7 OR L8 OR L10 OR L11 OR L12 OR L13 OR L14
L16	33	S	L4 AND L15
L17	7	DUP REM	L16 (26 DUPLICATES REMOVED)

	Document ID	Kind Codes	Source	Issue Date	Pages
1	US 20070065913 A1		US-PGPUB	20070322	42
2	US 20060059587 A1		US-PGPUB	20060316	30
3	US 20050053985 A1		US-PGPUB	20050310	150
4	US 20030211587 A1		US-PGPUB	20031113	24
5	US 7083945 B1		USPAT	20060801	41
6	US 6482646 B1		USPAT	20021119	46
7	US 6225526 B1		USPAT	20010501	17
8	US 6197588 B1		USPAT	20010306	21
9	US 6183984 B1		USPAT	20010206	37
10	US 5981219 A		USPAT	19991109	18
11	US 5811247 A		USPAT	19980922	24
12	US 4378016 A		USPAT	19830329	9

	Title
1	ISOLATION OF BINDING PROTEINS WITH HIGH AFFINITY TO LIGANDS
2	Plastidial-targeting peptide
3	RNA processing protein complexes and uses thereof
4	Keptin-a novel keratinocyte-specific proteinase inhibitor
5	Isolation of binding proteins with high affinity to ligands
6	Plant proteins that interact with nuclear matrix proteins and function as transcriptional activators
7	DNA molecules which code for a plastid 2-oxoglutarate/malate
8	Plastid inner envelope membrane targeting polypeptides, manufacture and use thereof
9	Sequences for promoting epidermal cell-specific transcription
10	DNA molecules which code for a plastid 2-oxoglutarate/malate translocator
11	Monoclonal antibodies to nucleolar protein
12	Artificial endocrine gland containing hormone-producing cells

	Document ID	Kind Codes	Source	Issue Date	Pages
1	US 20070118925 A1		US-PGPUB	20070524	32
2	US 20060259998 A1		US-PGPUB	20061116	102
3	US 20060225148 A1		US-PGPUB	20061005	35
4	US 20060150287 A1		US-PGPUB	20060706	113
5	US 20060117412 A1		US-PGPUB	20060601	74
6	US 20060112447 A1		US-PGPUB	20060525	77
7	US 20050283848 A1		US-PGPUB	20051222	36
8	US 20050278801 A1		US-PGPUB	20051215	35
9	US 20050268355 A1		US-PGPUB	20051201	94
10	US 20050268352 A1		US-PGPUB	20051201	73
11	US 20050144667 A1		US-PGPUB	20050630	77
12	US 20050102716 A1		US-PGPUB	20050512	95
13	US 20050081259 A1		US-PGPUB	20050414	99
14	US 20040265805 A1		US-PGPUB	20041230	26
15	US 20030213013 A1		US-PGPUB	20031113	21

	Title
1	Plastid Transit Peptides
2	Transgenic plants used as a bioreactor system
3	Plastid transit peptides
4	Translation control elements for high-level protein expression in the plastids of higher plants and methods of use thereof
5	Pharmaceutical proteins, human therapeutics, human serum albumin insulin, native cholera toxic B submitted on transgenic plastids
6	Nucleotide sequences encoding cry1bb proteins for enhanced expression in plants
7	Expression of eukaryotic peptides in plant plastids
8	Plastid transit peptides
9	Modified threonine deaminase
10	Materials and methods for the alteration of enzyme and acetyl CoA levels in plants
11	Plant polypeptides and polynucleotides encoding same
12	Transgenic plants containing altered levels of sterol compounds and tocopherols
13	Herbicide tolerance achieved through plastid transformation
14	Method for cloning large DNA
15	Fructose polymer synthesis in monocot plastids

	Document ID	Kind Codes	Source	Issue Date	Pages
16	US 20030207452 A1		US-PGPUB	20031106	15
17	US 20030176675 A1		US-PGPUB	20030918	123
18	US 20030154513 A1		US-PGPUB	20030814	132
19	US 20030106090 A1		US-PGPUB	20030605	73
20	US 20030088081 A1		US-PGPUB	20030508	60
21	US 20030033636 A1		US-PGPUB	20030213	36
22	US 20030028917 A1		US-PGPUB	20030206	99
23	US 20020182690 A1		US-PGPUB	20021205	67
24	US 20020162137 A1		US-PGPUB	20021031	45
25	US 20020073443 A1		US-PGPUB	20020613	91
26	US 20020062502 A1		US-PGPUB	20020523	28
27	US 20020059656 A1		US-PGPUB	20020516	34
28	US 20020053094 A1		US-PGPUB	20020502	31
29	US 20010016956 A1		US-PGPUB	20010823	98
30	US 7259293 B2		USPAT	20070821	35
31	US 7244877 B2		USPAT	20070717	129

	Title
16	Methods for transforming plants plastids and making transplastomic plants
17	TyrA genes and uses thereof
18	Methyltransferase genes and uses thereof
19	Materials and methods for the alteration of enzyme and acetyl CoA levels in plants
20	High level expression of immunogenic proteins in the plastids of higher plants
21	Expression of eukaryotic peptides in plant plastids
22	Methods of optimizing substrate pools and biosynthesis of poly-beta-hydroxybutyrate-co-poly-beta-hydroxyvalerate in bacteria and plants
23	POLYHYDROXYALKANOATE BIOSYNTHESIS ASSOCIATED PROTEINS AND CODING REGION IN BACILLUS MEGATERIUM
24	MATERIALS AND METHODS FOR THE ALTERATION OF ENZYME AND ACETYL COA LEVELS IN PLANTS
25	Herbicide tolerance achieved through plastid transformation
26	Transgenic plants expressing cellulolytic enzymes
27	Recombinant proteins containing repeating units
28	EXPRESSION OF EUKARYOTIC PEPTIDES IN PLANT PLASTIDS
29	Herbicide-tolerant protox genes produced by DNA shuffling
30	Expression of eukaryotic peptides in plant plastids
31	Methyltransferase from cotton and uses thereof

	Document ID	Kind Codes	Source	Issue Date	Pages
32	US 7238855 B2		USPAT	20070703	124
33	US 7226787 B2		USPAT	20070605	19
34	US 7217860 B1		USPAT	20070515	37
35	US 7193133 B2		USPAT	20070320	31
36	US 7192753 B2		USPAT	20070320	84
37	US 7186560 B2		USPAT	20070306	69
38	US 7119255 B2		USPAT	20061010	61
39	US 7060467 B2		USPAT	20060613	30
40	US 6987215 B1		USPAT	20060117	108
41	US 6946588 B2		USPAT	20050920	87
42	US 6942994 B2		USPAT	20050913	71
43	US 6835820 B2		USPAT	20041228	56
44	US 6818803 B1		USPAT	20041116	42
45	US 6812379 B2		USPAT	20041102	34
46	US 6808904 B2		USPAT	20041026	90

	Title
32	TyrA genes and uses thereof
33	Methods for transforming plant plastids and making transplastomic plants
34	Site-specific recombination system to manipulate the plastid genome of higher plants
35	Plastid transit peptides
36	Modified threonine deaminase
37	High level expression of immunogenic proteins in the plastids of higher plants
38	Promoter from maize prolamin seed storage protein and uses thereof
39	Recombinant proteins containing repeating units
40	Translation control elements for high-level protein expression in the plastids of higher plants and methods of use thereof
41	Nucleic acid encoding a modified threonine deaminase and methods of use
42	Materials and methods for the alteration of enzyme and acetyl CoA levels in plants
43	Polyhydroxyalkanoate biosynthesis associated proteins and coding region in bacillus megaterium
44	Transgenic plants as an alternative source of lignocellulosic-degrading enzymes
45	Expression of eukaryotic peptides in plant plastids
46	Herbicide-tolerant protox genes produced by DNA shuffling

	Document ID	Kind Codes	Source	Issue Date	Pages
47	US 6773917 B1		USPAT	20040810	78
48	US 6764851 B2		USPAT	20040720	72
49	US 6538179 B1		USPAT	20030325	74
50	US 6512162 B2		USPAT	20030128	32
51	US 6492578 B1		USPAT	20021210	26
52	US 6308458 B1		USPAT	20011030	96
53	US 6271444 B1		USPAT	20010807	32
54	US 6228623 B1		USPAT	20010508	97
55	US 6143561 A		USPAT	20001107	85
56	US 6117658 A		USPAT	20000912	20
57	US 6091002 A		USPAT	20000718	95
58	US 6084155 A		USPAT	20000704	95
59	US 5959179 A		USPAT	19990928	85

	Title
47	Use of DNA encoding plastid pyruvate dehydrogenase and branched chain oxoacid dehydrogenase components to enhance polyhydroxyalkanoate biosynthesis in plants
48	Materials and methods for the alteration of enzyme and acetyl CoA levels in plants
49	Enhanced starch biosynthesis in seeds
50	Expression of eukaryotic peptides in plant plastids
51	Expression of herbicide tolerance genes in plant plastids
52	Herbicide-tolerant plants and methods of controlling the growth of undesired vegetation
53	Enhancer elements for increased translation in plant plastids
54	Polyhydroxyalkanoates of narrow molecular weight distribution prepared in transgenic plants
55	DNA encoding plastid pyruvate dehydrogenase and branched chain oxoacid dehydrogenase components
56	Methods of making polyhydroxyalkanoates comprising 4-hydroxybutyrate monomer units
57	Polyhydroxyalkanoates of narrow molecular weight distribution prepared in transgenic plants
58	Herbicide-tolerant protoporphyrinogen oxidase ("protox") genes
59	Method for transforming soybeans

	Document ID	Kind Codes	Source	Issue Date	Pages
60	US 5958745 A		USPAT	19990928	87
61	US 5942660 A		USPAT	19990824	86
62	US 5861277 A		USPAT	19990119	39
63	US 5648249 A		USPAT	19970715	34
64	US 5608149 A		USPAT	19970304	71
65	US 5536653 A		USPAT	19960716	9
66	US 5530191 A		USPAT	19960625	31
67	US 5498830 A		USPAT	19960312	70

	Title
60	Methods of optimizing substrate pools and biosynthesis of poly-.beta.-hydroxybutyrate-co-poly-.beta.-hydroxyvalerate in bacteria and plants
61	Methods of optimizing substrate pools and biosynthesis of poly-.beta.-hydroxybutyrate-co-poly-.beta.-hydroxyvalerate in bacteria and plants
62	Methods and compositions for enhancing the expression of genes in plants
63	Method of improving the quality of stored potatoes
64	Enhanced starch biosynthesis in tomatoes
65	Tomato fruit promoters
66	Method for producing cytoplasmic male sterility in plants and use thereof in production of hybrid seed
67	Decreased oil content in plant seeds

	Document ID	Kind Codes	Source	Issue Date	Pages
1	US 5880332 A		USPAT	19990309	21

	Title
1	DNA constructs related to capsanthin capsorubin synthase, cells and plants derived therefrom

	L #	Hits	Search Text
1	L1	4207	plastid$2 or intraplastid$2
2	L2	0	"WKIQKGMIRPE"
3	L3	450609	chimer$3 or fus$3
4	L4	861	l1 same l3
5	L5	1	taget$3 same l4
6	L6	473	target$3 same l4
7	L7	12	inner adj membrane adj3 envelop$3
8	L8	0	l1 adj traget$2
9	L9	181	l1 adj target$2
10	L10	67	l3 same l9
11	L11	20089	SALVI MIRAS JOYARD FERRO GARIN GRUNWALD
12	L12	1	l9 and l11